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09/29/2006

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EXAMINER

RAMIREZ, ARMANDO P

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

05/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,932	<b>Applicant(s)</b> ONO, MITSUMASA	
	<b>Examiner</b> ARMANDO P. RAMIREZ	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02/23/2009, 03/24/2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 15-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :09/29/2006, 03/20/2007, 03/24/2009.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. **Claims 10-14 are withdrawn** from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 02/23/2009.

2. **Applicant's election without traverse of Claims 1-9 and 15-20** in the reply filed on 02/23/2009 is acknowledged.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102/103***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Minoru (JP 2002-311241, A, machine translation from Japanese to English).**

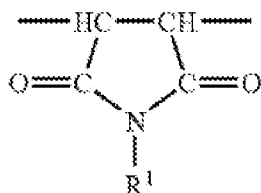
**A 35 U.S.C. 102/103 rejection has been approved** by the courts in the context of product-by-process claims when a prior art product is found that appears to be the same as claimed product. See MPEP 2113.

**Minoru teaches with respect to Claims 1-3, the claimed stretched film (X)** (*See at least 0001 and Example 1, 0118-0124*) obtained from a resin composition by melt-extrusion casting (*extruded melting and cooled on a drum, considered to be melt-extrusion casting, 0119*) followed by stretching at least in one direction (*stretching zones, and bi-axially oriented, considered to be stretching in at least one direction, 0123*),

(1) the resin composition containing a maleimide-olefin copolymer (A) having 40 to 60 mol % (*20-70 mol %, 0011, lines 6-7*) of a recurring unit represented by the following formula (I),

Formula (I) (Instant Claim):	Formula (II) (Instant Claim):
	$\begin{array}{c} \text{R}^2 \\   \\ \text{---CH}_2\text{---C---} \\   \\ \text{R}^3 \end{array}$

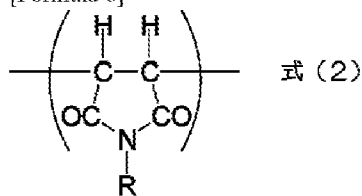
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wherein  $R^1$  is a hydrogen atom, an alkyl group having 1 to 6 carbon atoms or a monovalent aromatic hydrocarbon group, and 60 to 40 mol % (30-80 mol %, 0011, line 4) of a recurring unit represented by the following formula (II)

**Minoru (Prior Art, 0014):**

[Formula 6]

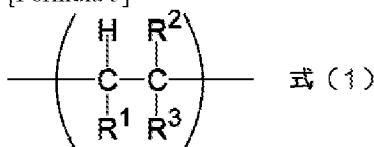


[0015]{In a formula (2), R shows hydrogen, the alkyl group of the carbon numbers 1-18, or the cycloalkyl group of the carbon numbers 3-12.)

wherein each of  $R^2$  and  $R^3$  is independently a hydrogen atom or an alkyl group having 1 to 6 carbon atoms,

**Minoru (Prior Art, 0012):**

[Formula 5]



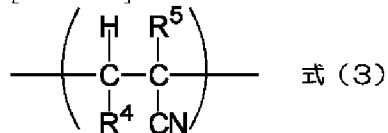
[0013]{In a formula (1),  $R^1$ ,  $R^2$ , and  $R^3$  show hydrogen or the alkyl group of the carbon numbers 1-8 independently, respectively.)

and an acrylonitrile-styrene copolymer (B) (see at least 0010-0011, 0016, and specifically 0016 and 0018, *vide infra*) containing 21 to 45% (20 to 50 %, 0011, line 11) by weight of an acrylonitrile unit (Formula 7 [3], 0016), the resin composition having a copolymer (A) content of at least 50% by weight but not more than 99% by-weight (55 to 75 %, 0011, line 15) and a copolymer (B) content of at least 1% by weight but not more than 50% by weight (25 to 45 %, 0011, line 16),

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**Minoru (Prior Art, 0016):**

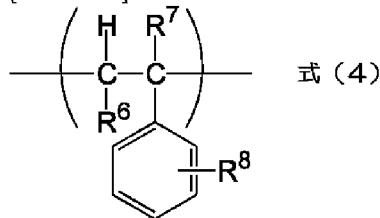
[Formula 7]



[0017](In a formula (3), R<sup>4</sup> and R<sup>5</sup> show hydrogen or the alkyl group of the carbon numbers 1-8 independently.

**Minoru (Prior Art, 0018):**

[Formula 8]



[0019](R<sup>6</sup> and R<sup>7</sup> in a formula (4)) Independently, hydrogen or the alkyl group of the carbon numbers 1-8 is shown, respectively, and R<sup>8</sup>, Hydrogen, the alkyl group of the

(2) the stretched film (X) having a maximum retardation (R<sub>p</sub>) at 550 nm (550-nm, 0116) in an in-plane direction, the maximum retardation satisfying the following expression,

$$10 \text{ nm} < R_p \leq 400 \text{ nm} \quad (\text{less than } 20 \text{ nm, phase contrast of a plane}$$

*direction is considered to be R<sub>p</sub>, see at least 0107, lines 1-4)*

(3) the stretched film (X) having a retardation (R<sub>th</sub>) at 550 nm (550-nm, 0116) in the thickness direction, the retardation satisfying the following expression,

$$0 \text{ nm} < |R_{th}| \leq 400 \text{ nm} \quad (200 \text{ nm or less, phase contrast of a thickness}$$

*direction is considered to be R<sub>th</sub>, 0107, lines 12-13).*

**With respect to the claimed wherein R<sup>1</sup> is,** a hydrogen atom, an alkyl group having 1 to 6 carbon atoms or a monovalent aromatic hydrocarbon group, Minoru teaches the claimed R<sup>1</sup> is hydrogen atom (0015, line 1), the claimed R<sup>1</sup> is alkyl group having 1 to 6 carbon atoms (*alkyl group of the carbon number 1-18, 0015 lines 1-2*) or the claimed R<sup>1</sup> is monovalent aromatic hydrocarbon group (*cyclo alkyl group carbon numbers 3-12, 0014, line 2-3*)

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**With respect to the claimed  $R^1$  is a monovalent aromatic hydrocarbon group;** The similarity between the chemical structures and properties in sufficiently close in the analogous series of compounds that one of ordinary skill in the art would have been motivated to make the analogous series; wherein  $R^1$  is a monovalent aromatic hydrocarbon group.

Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to have altered the substitution of the maleimide amine “ $R^1$ ” in light of the teachings of Minoru, which specifically define  $R^1$  as a *cyclo alkyl group, whose size is from 3-12 carbons*. Ultimately, the aforementioned modification leads to changes in  $\pi$ -stacking interactions, which modify the overall structure of the material, and as such also modify the light absorbing properties of the film in order to obtain the desired amount of protection pertaining to the stretched film that is subsequently incorporated in the LCD structure.

“A prima facie case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties.”

*In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). MPEP 2144.09.

**With respect to the claimed wherein each of  $R^2$  and  $R^3$  is independently a hydrogen atom or an alkyl group having 1 to 6 carbon atoms,** Minoru teaches the claimed  $R^2$  and  $R^3$  is independently a hydrogen atom (*0013, line 1*) or the claimed  $R^2$  and  $R^3$  is independently an alkyl group having 1 to 6 carbon atoms (*alkyl group of the carbon numbers 1-8, 0013, line 2*).

**With respect to the claimed concentration and retardation ranges,** the concentration and retardation ranges as taught by Minoru overlap the ranges as instantly claimed.



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**With respect to the claimed method of preparing the stretched film**, Minoru does not specifically teach “**casting**,” however, the reference does teach essentially the identical process as claimed by the applicant, see specifically Example 1, paragraphs 0118 through 0121. Minoru teaches the claimed film is extruded, melted (*0119, lines 1-3*), cooled in a cooling drum (*0119, line 4*), and stretched with extension rolls (*0123, line 5*). Therefore, one of ordinary skill in the art would consider the invention of Minoru to be essentially identically prepared as claimed in the instant claim.

Nevertheless, “Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by different process.” *In re Thorpe*, 227 USPQ 964,966. Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 8802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113.

**With respect to Claim 4**, Minoru teaches the invention set forth above, but does not specifically teach the claimed mathematical expression as claimed, which satisfies the following expressions,

$$n_y < n_z < n_x \quad \text{and}$$

$$0.3 \leq [(n_x - n_z) / (n_x - n_y)] \leq 0.9,$$

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wherein  $n_x$  is a refractive index in an in-plane lagging axis direction at 550 nm,  $n_y$  is a refractive index in a direction perpendicular to the in-plane lagging axis at 550 nm, and  $n_z$  is a refractive index in the thickness direction at 550 nm.

As Minoru teaches using essentially the same identical materials, concentrations, method of production, and retardation values as instantly claimed (*vide supra*), one of ordinary skill in the art would expect the film of Minoru to possess the ability to refract light in the respective directions  $n_x$ ,  $n_y$ , and  $n_z$ , because the retardation is a product of the refractive index ( $n_x$ ,  $n_y$ , and  $n_z$ ) and because the light used to determine the refractive indices is identical to the light used by Minoru i.e. 550 nm (0116).

**With respect to Claim 5**, Minoru teaches the invention set forth above, but does not specifically teach the claimed stretched film, which is a product by the stretching at a stretch ratio that satisfies the following expression (*see at least 0100 and 0123*),

$$R_{MD} > R_{TD} \text{ (extended 1.8 times with an extension roll, 0123) } \text{ or }$$

$$R_{TD} > R_{MD}$$

wherein  $R_{MD}$  is a stretch ratio in the machine direction (*vertical drawing machine, 0123*) and  $R_{TD}$  is a stretch ratio in the transverse direction.

Minoru teaches a bi-axially stretched film (0123), and extension of the film, longitudinally (machine direction), laterally (considered to be transverse direction as instantly claimed), or “in order to improve in both directions, it is preferred to perform biaxial stretching.” (0100). Therefore, extended by 1.8 times meets the claimed  $R_{MD} > R_{TD}$ , since extended by 1.8 times in the vertical drawing machine is considered to be  $R_{MD}$ . Also see MPEP 2113.

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**With respect to Claim 6**, Minoru teaches the claimed stretched film, wherein  $|R_{MD}/R_{TD}|$  or  $|R_{TD}/R_{MD}|$  is in the range of over 1.0 but not more than 5.0 (*1.8, 0123*). The number as taught by Minoru is within the range as claimed by the applicant in the instant claim.

**With respect to Claim 7**, Minoru teaches the claimed stretched film, which is a biaxially stretched film (*see at least 0123*).

**With respect to Claim 8**, Minoru teaches the claimed stretched film, but does not specifically teach the claimed film which has one or less coarse streaked projection having a height of 10  $\mu\text{m}$  or more, a width of 0.3 mm or more and a length of 5 cm or more, per meter of width in the transverse direction of the stretched film.

Minoru, however, teaches that “By extending in a suitable temperature requirement, a film white blush mark at the time of extension can be decreased or prevented” (0105). The mark as taught by the reference is considered to be the streak as instantly claimed.

If the mark as taught by Minoru is not presumed to be the claimed coarse streaked projection, the claimed one or less coarse streaked projection is presumed to be met by the reference because the range includes the lower limit of no streaks, or prevented as taught by Minoru (*0105*).

With respect to the specific limitations of the claimed one or less coarse streaked projection, having “a width of 0.3 mm or more and a length of 5 cm or more,” “or more” would include the upper limit and would result in a flat film, or no coarse streaked projection. Therefore, these instant limitations are met by Minoru in the teaching of the phrase “decreased or prevented.” (*vide supra*).

**With respect to Claim 9**, Minoru teaches the invention set forth above, but does not specifically teach the claimed stretched film, which has a water vapor permeability of 5 to 250 g/(m<sup>2</sup> •day).

As Minoru teaches using essentially the same identical materials, concentrations, method of production, and retardation values as instantly claimed (*vide supra*), one of ordinary skill in the art would expect the film of Minoru to possess essentially the identical ability to diffuse water vapor at a rate of 5 to 250 g/(m<sup>2</sup> •day).

***Claim Rejections - 35 USC § 103***

**7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minoru (JP 2002-311241, A, machine translation from Japanese to English).**

**With respect to Claim 18**, Minoru teaches the invention set forth above, including the specifics of the material composition, concentration of the specific monomers that composed the copolymers, essentially the same method of bi-axial stretching, and the properties of the film, but does not specifically teach the claimed laminated material that includes a polarizer film.

At the time of the invention, however, it would have been extremely obvious to one of ordinary skill in the art to include a polarizer film in between the polarizer protective film as taught by Minoru (0001). The motivation would be as described by Minoru, “which protects the light polarizer...” (0001).

Therefore, it would have been obvious to laminate the polarizing film with the protective film as taught by Minoru in order to modify the durability of the polarizer.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

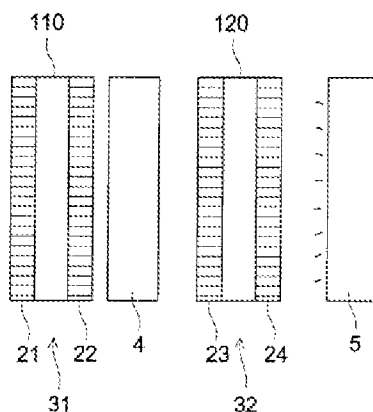
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 15-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minoru (JP 2002-311241, A, machine translation from Japanese to English) in view of Shibue (US 6,503,581 B1).**

**With respect to Claim 15**, Minoru teaches the invention set forth above, but does not specifically teach the claimed laminated material comprising the stretched film (X) and a polarizer formed thereon. Shibue, however, teaches the claimed laminated polarizer (*Figure 1, items 110, and 120, Col. 21, lines 13-25*).

**Shibue (Prior Art, Figure 1):**

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Minoru and Shibue are analogous art because they are from the same field of endeavor, such as optical films. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Minoru and Shibue before him or her, to modify the film of Minoru in order to include a polarizer film as taught by Shibue. The motivation for doing so would be to provide Minoru's invention with the capability of polarizing light, thereby including a polarizer film to obtain a polarizing plate as described by Shibue (*Col. 1, lines 5-9*). Therefore, it would have been obvious to combine Minoru and Shibue to obtain the invention as specified in the instant claims.

**With respect to Claim 16**, Minoru and Shibue teach the claimed laminated material, wherein the polarizer is formed from a polyvinyl alcohol containing iodine or an anisotropic dye (*Shibue, Col. 16, lines 39-51*).

**With respect to Claim 17**, Minoru and Shibue teach the claimed laminated material, wherein a film is further formed on the polarizer (*Shibue, see Figure 1, vide supra*). Layer 110 and layer 120 are laminated.

**With respect to Claim 19**, Minoru and Shibue teach the claimed laminated material, which is a sheet polarizer (*see at least Shibue, Figure 1, 31 and 32*).

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**With respect to Claim 20**, Minoru teaches the claimed liquid crystal display (*Figure 1*) comprising a liquid crystal cell and laminated materials (*31 and 32*) arranged on both surfaces of the liquid crystal cell (*4*).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARMANDO P. RAMIREZ whose telephone number is (571)270-7083. The examiner can normally be reached on Mon - Thur (4/5/9).

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

/A. P. R./